

ABSTRACT OF THE DISCLOSURE

APPARATUS AND METHOD FOR ENHANCING THE UNIFORM ETCHING CAPABILITY OF AN ION BEAM GRID

[00029] A shaper for an ion beam gun has a thin, flat plate with a non-symmetrical profile including notches and tabs. The shaper is mounted to the surface of an ion beam grid having an array of holes. The shaper is oriented radially on the grid and covers some of the holes in the grid. The grid is mounted to an ion beam gun above a specimen that is rotated beneath the ion beam gun. The ion beam is filtered into smaller ion beamlets by the grid. The ion beamlets permeate the holes in the grid that are not covered by the shaper. The ion beamlets reach the specimen to etch it more uniformly than a grid that does not have a shaper. The shaper may be further optimized for a particular grid via a trial-and-error process to even further refine the uniformity of etching depth.